

[Please add new claim 7 as follows:]

- 7. A multi-band radio terminal apparatus comprising:
- a transmitter/receiver for processing radio communication signals of a plurality of communication frequency bands, said radio communication signals being used to communicate with a base station;
- a first frequency converter for frequency-converting the frequency bands of said radio communication signals between the communication frequency bands and an intermediate frequency band; and
- a second frequency converter for converting said radio communication signals between base-band signals and an intermediate frequency signal,
- wherein said first frequency converter includes:
- one reception-sided mixer for converting a reception signal within the communication frequency band into another reception signal within the intermediate frequency band,
- one transmission-sided mixer for converting a transmission signal within the intermediate frequency band into another transmission signal within the communication frequency band,
- a first local oscillator for commonly supplying a local oscillator signal to both said reception-sided mixer and said transmission-sided mixer,